



Giant Snow Globe

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TOOLS:

- [Drill \(1\)](#)
- [Metal pot \(1\)](#)
- [Mortar and pestle \(1\)](#)
- [Stove \(1\)](#)
- [Twist drill bit \(1\)](#)
- [jar with lid \(1\)](#)



PARTS:

- [Plastic figurine or other model\(s\) \(1\)](#)
- [Clear round smooth acrylic lamp globe \(1\)](#)
[Make sure it does not have screw threads in the neck. Size to fit your model.](#)
- [Rubber stopper \(1\)](#)
[Or sized to fit your globe.](#)
- [White out \(1\)](#)
- [Dowel pins \(2\)](#)
- [Eggshells \(24\)](#)
- [Bleach \(1 qt\)](#)
- [Water \(1 gal\)](#)
- [Glycerine/glycerol \(2 quarts\)](#)
[I recommend at least a 1:1 mixture of glycerine to water, by volume, to achieve a good "snow" effect.](#)

SUMMARY

This project began when I, myself, realized that deep need--that every man knows sooner or later in his life--which can only be satisfied by a say-hello-to-my-little-friend snow globe. I scoured the tubes looking for a suitable Tony Montana figurine, and though I found several, the only one featuring suitable full-auto-enraged-coke-frenzy action was [MezCo Toys'](#) Tony Montana ("The Fall" version), which is 7" tall. That's way too big for even the largest empty snow globe I could find. (It turns out, incidentally, that sourcing empty snow globes online is a bit of a trick. There are a couple of crappy kits on Amazon, and a predictable selection of snow-globe photo frames, but for the real stuff you have to go to [snowdomes.com](#).)



So I was forced to consider other options. Then one day at the hardware store I looked at a shelf full of glass lamp globes and the light bulb went on. And although the round, perfectly clear variety is a bit harder to find, I was able to run one down on eBay without spending too much time on it. The globe I used is made of glass, 8" in diameter, and features a 3.5" opening, which are ideal dimensions for the MezCo Tony Montana. Turns out the same globe is [available in clear acrylic](#), and frankly that would be a better choice because of the reduced weight and danger of breakage.

Next I had to figure out how to seal the opening. It wasn't long before I remembered seeing, in some lab that I worked in at some point, a really giant black rubber stopper. It took a bit of research, but it turns out the biggest rubber stopper manufactured, which is #15, fits very well into a 3.5" globe opening. These stoppers are commonly available in natural (i.e. off-white) and black rubber. I found a black #15 rubber stopper on eBay for not too much, and was able to figure out a clever way to seal it tightly into the neck of the globe without having to use adhesive, sealant, or tape.

The final problem was the snow itself. Turns out the composition of snow globe snow is a closely guarded trade secret, and although you can buy small packets of it as part of commercial snow globe kits, I couldn't find anyone selling it in bulk. Glitter can be used for this purpose, but it was totally inappropriate to serve as snow in the context of my vignette. A craft site put me on to the idea of using crushed eggshells, but it took some experimentation to figure out how to treat, clean, and grind them to make good snow.



Step 1 — Prepare snow



- The membrane on the interior surface of the eggshells must be removed before they will grind well. 
- Soak the shells overnight in straight bleach to remove the membrane, then put them aside to dry.
- Grind the shells, not too finely, with a mortar and pestle, then pour them into a jar.
- Cover the ground shells with several inches of water, put the lid on the jar, and shake it. The water will turn milky white, at first. Pour it off, and repeat the process until the water remains clear after shaking. This washes any remaining proteinaceous matter off the ground shells.
- Pour the water off one final time, then put the powder aside to dry.
- You could apply mild heat to accelerate drying, but be careful not to burn the shells. 

Step 2 — Prepare model(s)



- If any of your models have movable parts, I recommend fixing them in place with adhesive. I used 2-part epoxy to fix Tony's arms, gun, and head in suitably menacing positions.
- I know of no adhesive that will stick to butyl rubber, so I chose to use pins to secure Tony to the inside of the stopper. I drilled 1" deep holes up through the soles of his shoes and threaded in a couple of old soldering iron tips I had lying around.
- For the record, using steel pins is probably a bad idea,  and you should do as I say, not as I do. I'm afraid these tips may eventually corrode away and break, or possibly colorize the liquid, on long exposure to water. Better to use brass, aluminum, or plastic for this purpose.
- Make sure that your pins are not so long as to stick all the way through the stopper when the model is in place. 

Step 3 — Mount model(s)



- Smear a dollop of white-out on the tips of the mounting pins in your model(s), and then position them as desired over the smaller side of the rubber stopper, which will serve as a mounting base. Push them down just enough to deposit the white-out on the surface of the stopper, marking the locations of holes to be drilled.
- Drill holes where marked. Use a drill stop or a piece of Scotch tape to mark an appropriate drilling depth on the bit. If you drill too far and penetrate all the way through the stopper, you may create a leak in the finished globe. Use a drill the same diameter as your pins or slightly larger. The butyl rubber will close up, almost completely, when you remove the bit, but it won't re-bond to itself, so the channel is still there.
- Apply a smidge of epoxy to the pins, position them in their corresponding mounting holes, and push the figure into place on the stopper.


Step 4 — Add glycerine and snow



- Use a suitably sized bowl to hold the round globe in position on your work surface, with the opening pointing up.
- Pour in about 1/3 cup of prepared eggshells, followed by at least 2 quarts glycerin.

Step 5 — Boil water



- Make sure you have more than enough distilled water to fill the rest of the globe, put it in a pot, and bring it to a boil.
- There are two reasons for doing this: 1) Boiling  degases the water, which will help to prevent bubbles appearing once the globe is sealed. 2) The method for sealing the stopper in place depends on volumetric contraction of the water as it cools. Therefore it needs to be poured at well above room temperature.



Step 6 — Pour in water



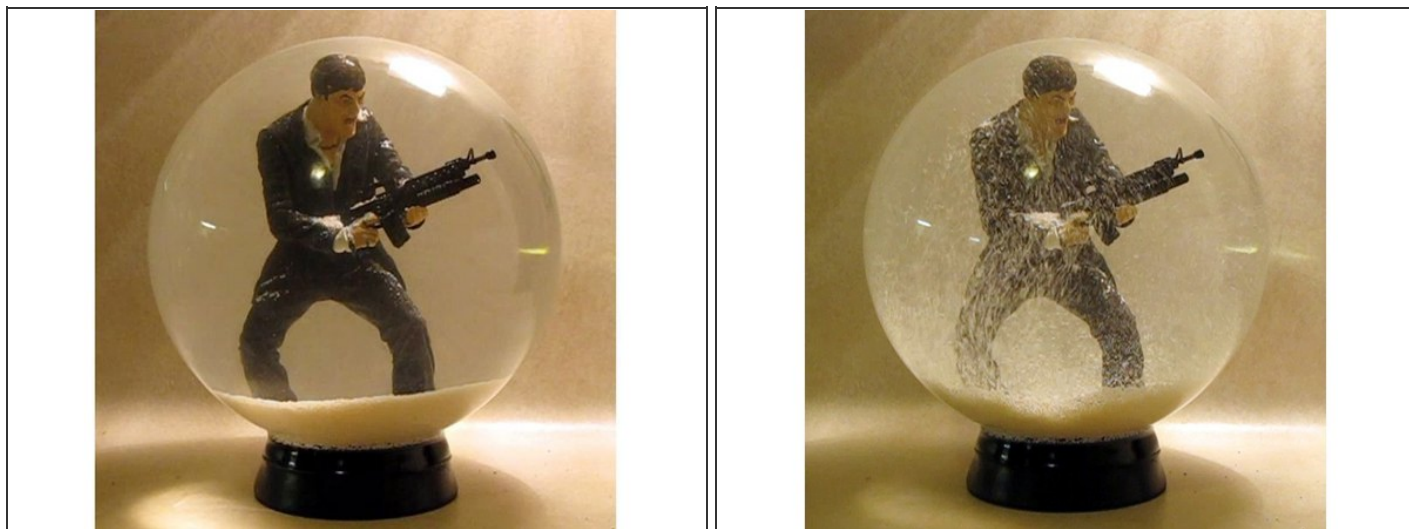
- Boil the water for about 10 minutes, then leave it to cool down, testing periodically until it's just cool enough to put your hand in comfortably.
- Working over the sink, pour the warm water into the globe with the snow and the glycerine. Fill the globe almost all the way, then stir up the contents with a spoon to dislodge any trapped air bubbles in the snow.
- Fill the globe the rest of the way up, until it's literally brimming over.

Step 7 — Assemble globe



- Insert the stopper bearing the attached model. Stir the model around a bit to dislodge any trapped air bubbles on it.
- Fit the stopper into the globe neck and push it into place as hard as you feel comfortable doing.
- The globe should be full enough that water squishes out when you do this, and no air bubbles are trapped. 
- Leave the globe in a secure place overnight to allow it to cool to room temperature.
- As it cools, the water will contract in volume and pull the stopper in hard. The stopper on my globe is so firmly set in place that I don't think I could dislodge it with my hands, at room temperature, even if I really wanted to. 

Step 8 — Shake it up!



- If you've screwed something up, or a bunch of air bubbles appear in your globe over the next few days, don't worry. The globe can be disassembled again just by warming it up in a bucket of hot water.
- While the globe is warm, you can open it, fix the problem, and seal it up again before it cools, if you work quickly.



If you have problems with air bubbles appearing around the stopper as the globe cools, don't fret. Warm up another pot of water, big enough to submerge the entire globe, until it is about the same temperature as the globe. Then remove the globe stopper, and very gently lower the open globe into the pot of warm water, slowly allowing the empty space at its neck to fill from the surrounding fluid. This should be done carefully to avoid agitating the water excessively, and hence causing more glycerine than is necessary to diffuse out of the globe. Once all the bubbles are gone, reinsert the stopper as tightly as possible, and leave the globe in the pot to cool overnight.

Finally, I would really like to add some scale C-notes to the water in my globe to complete the effect, but I haven't been able to come up with any clever way to produce waterproof model currency in an appropriate size. Any suggestions you may have will be welcome in the comments.

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